

**REMARKS**

Upon entry of this amendment, claims 38, 39, 40, 44, 45, 46, 48, 49, 50, 54, 56, 57, 58, 59, 62, 64, 65, 68, 70, 71, and 72 will be pending in the application. Claims 38, 39, 40, 44, 48, 49, 50, 54, 56, 57, 58, 59, 62, 64, 65, and 68 are amended. Claims 1-37, 41-43, 47, 51-53, 55, 60, 61, 63, 66, 67, and 69 are canceled. Claim 70-72 are added. Exemplary support for the new claims is located in Figure 4 and on page 6 of the specification as amended herein. No new matter is introduced herein.

Applicants herein amend the specification to incorporate the sequence of the Italian Priority Document which describes the 130 kDa CAI antigen by partial amino acid and nucleic acid sequence. The contents of this priority document had been incorporated by reference, thus no new matter is added.

Entry of the Substitute Sequence Listing adding SEQ ID NOS: 25 and 26 as supported in Figure 3 and SEQ ID NOS: 27, 28, and 29 as supported on page 6 as amended herein is respectfully requested. The specification is amended to reflect the sequence identifiers assigned to sequences shown in Figure 3. Withdrawal of the objection to the specification is respectfully requested.

Withdrawal of the objection to claims 56 and 59 in view of the amendment of those claims to include italicization of the term “*Helicobacter pylori*” is respectfully requested.

Withdrawal of the objection to the claims in view of the amendment of the claims to include a space following “SEQ ID NO:” is respectfully requested.

***Obviousness-type double patenting***

Claims 38-40, 44, 49, 50, 54, 59, 62-66, and 68 are rejected for alleged obviousness-type double patenting over claims 39 and 40 of co-pending U.S. Application Serial No. 11/580,632, filed October 11, 2006. MPEP § 804.I.B provides that, “[i]f a ‘provisional’ nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later-filed application is rejectable on other grounds, the examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer.” As the present application is the earlier filed application, upon resolution of other grounds of rejection, the

obviousness-type double patenting rejection over U.S. Application Serial No. 11/580,632 should be withdrawn and the present application allowed to issue without a terminal disclaimer.

Claims 38-40, 44, 49, 50, 59, 62, and 65 are rejected for alleged obviousness-type double patenting over claims 1, 3, 4, 6, and 7 of U.S. Patent No. 6,090,611. Applicants respectfully request that the rejection be held in abeyance pending notification of allowable subject matter in the present application.

***The claims as amended herein do not contain new matter.***

Claims 38-40, 44-46, and 48-50 are rejected under the first paragraph of section 112 for allegedly containing new matter in recitation of the phrase “at least one nucleotide sequence encoding the amino acid sequence of SEQ ID NO:10.” Without conceding the propriety of the rejection and in an effort to advance prosecution of the application, Applicants have amended claim 38 to recite “[a]n isolated polynucleotide comprising at least 15 contiguous nucleotides from the nucleotide sequence of SEQ ID NO: 4, wherein said polynucleotide encodes a polypeptide comprising one or two amino acid sequences of SEQ ID NO: 10.” Claim 44 is amended herein to recite “[a]n isolated polynucleotide encoding a polypeptide comprising at least five contiguous amino acids from the amino acid sequence of SEQ ID NO: 5, wherein said polypeptide comprises one or two amino acid sequences of SEQ ID NO: 10.” Exemplary support for the amendments is located in the specification on page 6 as amended herein and in Figure 4. Withdrawal of the rejection is respectfully requested.

Claims 63, 66, and 68 are rejected under the first paragraph of section 112 for alleged recitation of new matter. An objection to the specification based on similar grounds has been lodged in paragraph 8 of the Office Action. Without conceding the propriety of the objection and rejection and in an effort to advance prosecution of the application, Applicants have canceled claims 63 and 66. Claim 68 is amended herein to recite “[a]n isolated polynucleotide encoding a polypeptide comprising one or two amino acid sequences of SEQ ID NO: 10 and one or two amino acid sequences of SEQ ID NO: 9.” Exemplary support for the amendment is located in Figure 4 of the specification. Figure 4 clearly illustrates to one of ordinary skill in the art a polynucleotide encoding a polypeptide comprising SEQ ID NOS:

9 and 10, which sequences are boxed in the depicted amino acid sequence. Withdrawal of the rejection of the claim and objection to the specification is respectfully requested.

***Claim 68 as amended herein is definite.***

Claim 68 is rejected under the second paragraph of section 112 for alleged indefiniteness in recitation of the phrase “nucleotide sequence of a nucleotide sequence.” Claim 68 is amended herein to recite “[a]n isolated polynucleotide encoding a polypeptide comprising one or two amino acid sequences of SEQ ID NO: 10 and one or two amino acid sequences of SEQ ID NO: 9.” Withdrawal of the rejection is respectfully requested.

***The claims are not anticipated by the Covacci reference.***

Claims 38-40, 44-46, 48-50, 54, 56-59, 62-66, and 68 are rejected under section 102(b) for alleged anticipation by Covacci *et al.*, *PNAS*, 90:5791-5795, 1993 (“the Covacci reference”). Claims 63 and 66 have been canceled. Applicants traverse the rejection. As previously explained, the claims as amended herein do not contain new matter and are entitled to their priority date, which predates the June 1993 publication date of the Covacci reference. Withdrawal of the rejection is respectfully requested.

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**PATENT**

**Conclusion**

Applicants believe that the foregoing constitutes a complete and full response to the Office Action of record. Accordingly, an early and favorable Action is respectfully requested.

Respectfully submitted,

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